1A. MOUSE AIOLOS cDNA SEQUENCE

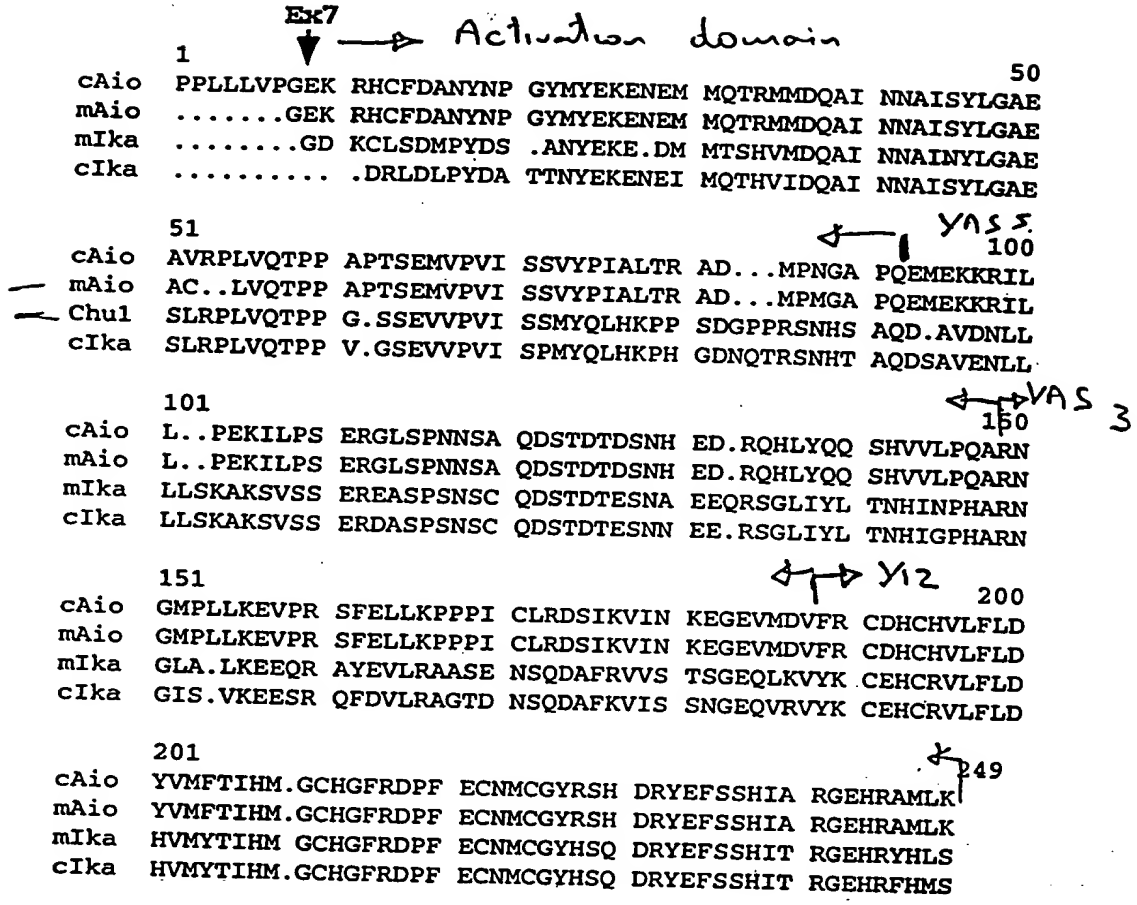
CACGAGCGCACACCGCTCGGCTCTCCTTGCGACACGCCCTCATCCCCGGTGTT
TCTCAAGTAGACGTCCCGAGACGGTCGCTGAGGCACTGTTTCCACGCGATCA
GGGTTCCTCAGGCTTGACATTCAAAAGTGGGTGCGGAACCCGCGGCACTCGG
AGCGTGCTTTAAAGCGGCCGCCAGCCAGCGCCGCTCTAACCTCGCGCCCCGG
CTGCCGGCGGCTCCCGCCCTGCATCTGCGCCGACGCGACCGAGCGATCCCGG
GGCCTCCCTGCGCCCGGAATCTCCCGCCAGCCGCGCGGGTCCCCACGGCAGC
AGCACGTGGAGCGGCCGCGGAGCCTGAGCGACAGCTGCAGCCCGCGCGGCC
CGCGGCGACATGGAAGATATACAACCGACTGTGGAGCTGAAAAGCACGGAG
GAGCAGCCTCTGCCCACAGAGAGCCCAGACGCTCTGAATGACTACAGCTTGC
CCAAACCTCATGAGATAGAAAACGTGGACAGTAGAGAAGCCCCAGCCAATG
AAGACGAAGATGCAGGAGAAGATTCGATGAAAGTGAAAGATGAATACAGCG
ACAGAGATGAGAACATTATGAAGCCGGAGCCCATGGGAGATGCAGAAGAGA
GTGAAATGCCTTACAGCTATGCAAGAGAATACAGCGACTATGAAAGCATTAA
GCTGGAGAGACACGTGCCCTATGACAACAGCAGACCAACCAGTGGGAAGAT
GAACTGCGACGTGTGCGGGTTATCCTGCATTAGCTTCAACGTCTTGATGGTTC
ATAAGCGAAGCCATACCGGCGAACGCCCGTTCCAGTGTAATCAGTGCGGGGC
ATCTTTTACTCAGAAAGGTAACCTCCTCCGTCATATTAAACTGCACACGGGGG
AAAAACCTTTTAAGTGTCACCTCTGCAACTACGCATGCCAAAGGAGAGATGC
GCTCACGGGACACCTTAGGACACATTCTGTGGAGAAGCCGTACAAGTGTGAG
TTCTGCGGAAGAAGCTACAAGCAGAGAAGCTCCCTGGAGGAGCACAAGGAA
CGCTGCCGAGCTTTTCTTCAGAACCCTGACCTGGGGGACGCTGCAAGTGTGG
AGGCAAGACACATCAAAGCCGAGATGGGAAGTGAGAGAGCTCTCGTCCTGG
ACAGATTAGCAAGCAATGTGGCTAAGCGAAAAAGCTCGATGCCTCAGAAATT
CATCGGTGAGAAGCGGCACTGCTTCGATGCCAACTACAATCCCGGCTACATG
TACGAGAAGGAGAACGAGATGATGCAGACCCGGATGATGGACCAAGCCATC
AATAACGCCATCAGCTATCTAGGGGCTGAAGCCTTCCGCCCCTTAGTCCAGA
CTCCGCCTGCTCCCACCTCTGAGATGGTCCCAGTCATCAGCAGTGTGTACCCC
ATAGCACTTACTCGGGCCGATATGCCAATGGGGGCCCCGCAgGAGATGGAAA
AGAAACGGATCCTCCTGCCAGAGAAGATCTTGCCTTCTGAACGAGGTCTGTC
CCCCAATAACAGTGCCCAGGACTCCACAGACACCGACAGCAACCACGAGGAT
CGCCAACATCTCTACCAGCAAAGCCACGTGGTCCTCCCCCAGGCCCGCAATG
GGATGCCTCTTCTGAAGGAGGTCCCTCGCTCTTTTGAACTCCTCAAGCCCCCT
CCCATCTGCCTGAGGGACTCCATCAAAGTGATCAACAAAGAAGGGGAGGTGA
TGGATGTGTTTCGATGTGACCACTGCCACGTCCTCTTCCTAGATTATGTGATG
TTCACCATCCACATGGGGTGCCATGGTTTCCGTGATCCCTTTGAGTGTAACAT
GTGTGGCTATCGAAGCCACGATCGCTATGAGTTCTCCTCTCACATCGCCAGAG
GAGAGCACAGAGCCATGTTGAAGTGAGCATCTGTCCTCAATGCGAGGGTCAA
CATTGTTTTTAAAGCTGATGGTAGCCTTATCCAGTAGACTGAACTCAAACCC
ACCTCGAG

FIGURE 1

1B. MOUSE AIOLOS PEPTIDE SEQUENCE

MEDIQPTVELKSTEEQPLPTESPDALNDYSLPKPHEIENVDSREAPANEDEDAGED
SMKVKDEYSDRDENIMKPEPMGDAEESEMPYSYAREYSDYESIKLERHVPYDNS
RPTSGKMNCDVCGLSCISFNVLMVHKRSHTGERPFQCNQCGASFTQKGNLLRHI
KLHTGEKPFKCHLCNYACQRRDALTGHLRTHSVEKPYKCEFCGRSYKQRSSLEE
HKERCRAFLQNPDLGDAASVEARHIKAEMGSERALVLDRLASNVAKRKSSMPQ
KFIGEKRHCFDANYNPGYMYEKENEMMQTRMMDQAINNAISYLGAEAFRPLVQ
TPPAPTSEMVPVISSVYPIALTRADMPMGAPQEMEKKRILLPEKILPSERGLSPNN
SAQDSTDTDSNHEDRQHLYQQSHVVLPQARNGMPLLKEVPRSFELLKPPPICLRD
SIKVINKEGEVMDVFRCDHCHVLFLDYVMFTIHMGCHGFRDPFECNMCGYRSH
DRYEFSSHIARGEHRAMLK

FIGURE 1(CON'T)



YAS 5 = interaction domain

YAS 3 = interaction domain

YIZ = Ikaros dimerization domain

FIGURE 2

```
      1
aio   ..........  ..........  ..........  ..........  ..........  50
Ik1   MDVDEGQDMS  QVSGKESPPV  SDTPDEGDEP  MPVPEDLSTT  SGAQQNSKSD

      51
aio   ..........  ..........  ..........  ..........  ..........  100
Ik1   RGMASNVKVE  TQSDEENGRA  CEMNGEECAE  DLRMLDASGE  KMNGSHRDQG

      101                                             Ex4
Ik    ..........  NSARGKMNCD  VCGLSCISFN  VLMVHKRTHT  GERPFQCNQC  150
Ik1   SSALSGVGGI  RLPNGKLKCD  ICGIVCIGPN  VLMVHKRSHT  GERPFQCNQC

      151                                                  Ex5
aio   GASFTQKGNL  LRHIKLHTGE  KPFKCHLCNY  ACQRRDALTG  HLRTHSVEKP  200
Ik1   GASFTQKGNL  LRHIKLHSGE  KPFKCHLCNY  ACRRRDALTG  HLRTHSVGKP

      201                                       Ex6
Aio   YKCEFCGRSY  KQRSSLEEHK  ERCRAFLQNP  DLGDAASV..  ......EARH  250
Ik1   HKCGYCGRSY  KQRSSLEEHK  ERCHNYLESM  GLPGMYPVIK  EETNHNEMAE

      251                                 Ex7
Aio   IKAEMGSERA  LVLDRLASNV  AKRKSSMPQK  FIGEKRHCFD  ANYNPGYMYE  300
Ik1   DLCKIGAERS  LVLDRLASNV  AKRKSSMPQK  FLGDK..CLS  DMPYDSANYE

      301
Aio   KENEMMQTRM  MDQ.......  ..........  ..........  ..........  350
Ik1   KE.DMMTSHV  MDQ
```

FIGURE 3

Exon 3

IRHEEAPANEDEDAGEDSMKVKDEYSDRDENIMKPEPMGDAEESEMPYSYA
REYSDYESIKLERHVPYDNSRPTSGKMNCDVCGLSCISFNVLMVHKRSHT

Exon 4

GERPFQCNQCGASFTQKGNLLRHIKLHTGEKPFKCHLCNYACQRRDALTGH
LRTHS

Exon 5

VEKPYKCEFCGRSYKQRSSLEEHKERCRAFLQNPDLGDA

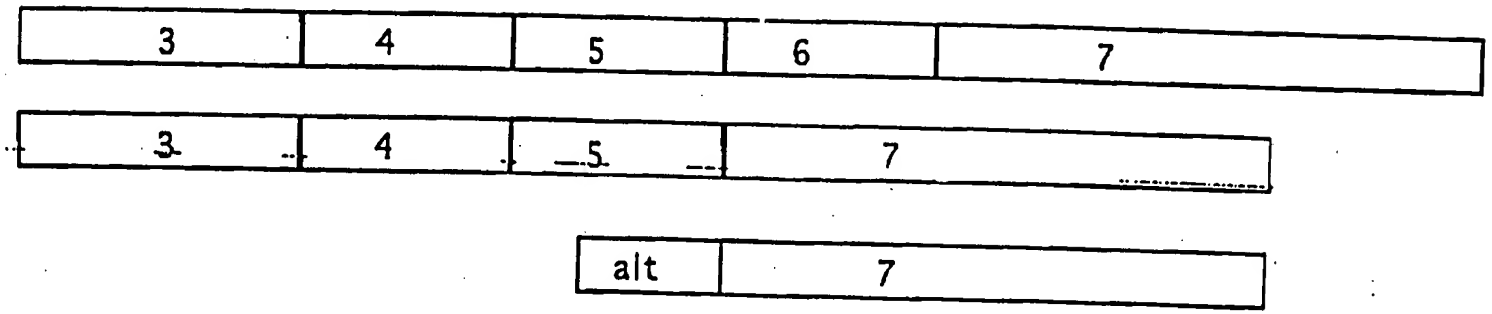
Exon 6

ASVEARHIKAEMGSERALVLDRLASNVAKRKSSMPQKFI

Exon 7

GEKRHCFDANYNPGYMYEKENEMMQTRMMDQAINNAISYLGAEAFRPLVQ
TPPAPTSEMVPVISSVYPIALTRADMPMGAPQEMEKKRILLPEKILPSERG
LSPNNSAQDSTDTDSNHEDRQHLYQQSHVVLPQARNGMPLLKEVPRSFEL
LKPPPICLRDSIKVINKEGEVMDVFRCDHCHVLFLDYVMFTIHMGCHGFRD
PFECNMCGYRSHDRYEFSSHIARGEHRAMLK

FIGURE 4



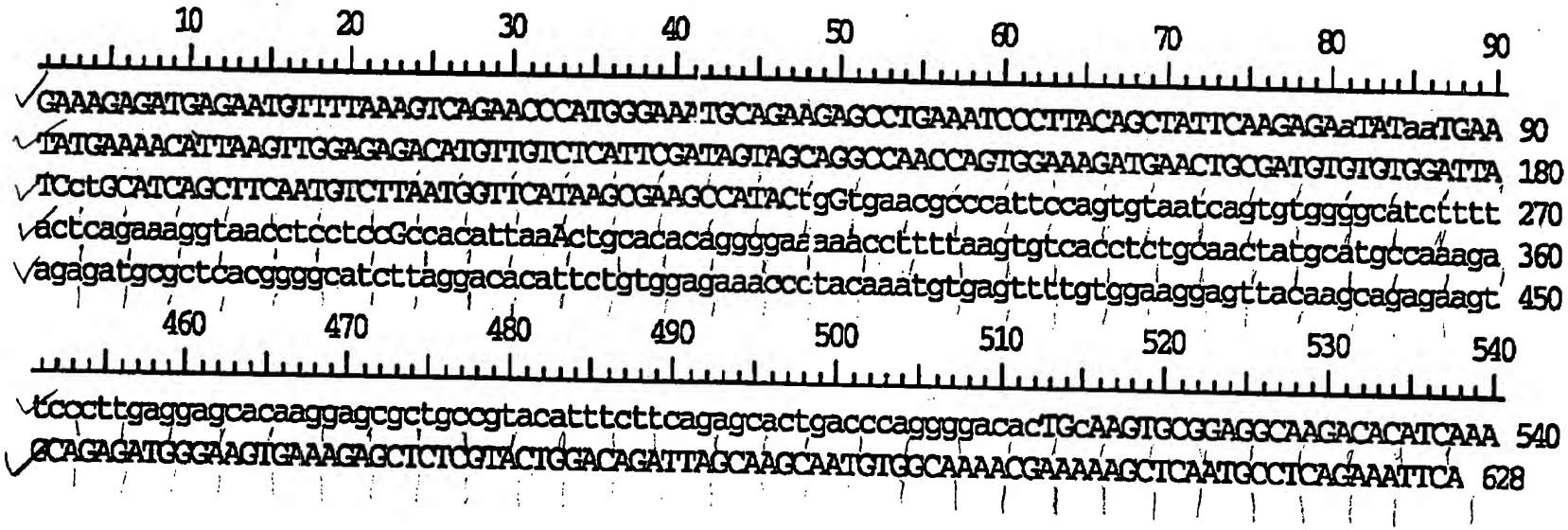


FIGURE 5A

Lipman-Pearson Protein Alignment
kTuple: 2; Gap Penalty: 4; Gap Length Penalty: 12

Seq1(1>209) human Aiolos protein AioC/hAio2	Seq2(1>508) mouseaiolos.protein	Similarity Index	Gap Number	Gap Length	Consensus Length
(1>209)	(66>273)	89.5	1	1	209

```
human Aiolos protein AioC/hAio2  ERDENVLKSEPMGNAEEPEIPYSYSREYNEYENIKLERHVVSFDSSRPTSGKMNCDVCGL  60
                                 :RDEN::K:EPMG:AEE:E:PYSY:REY::YE:IKLERHV::D:SRPTSGKMNCDVCGL
mous ai los. protein             DRDENIMKPEPMGDAEESEMPYSYAREYSDYESIKLERHV-PYDNSRPTSGKMNCDVCGL  124

human Aiolos protein AioC/hAio2  SCISFNVLMVHKRSHTGERPFQCNQCGASFTQKGNLLRHIKLHTGEKPFKCHLCNYACQR  120
                                 SCISFNVLMVHKRSHTGERPFQCNQCGASFTQKGNLLRHIKLHTGEKPFKCHLCNYACQR
mous aiolos. protein             SCISFNVLMVHKRSHTGERPFQCNQCGASFTQKGNLLRHIKLHTGEKPFKCHLCNYACQR  184

human Aiolos protein AioC/hAio2  RDALTGHLRTHSVEKPYKCEFCGRSYKQRSSLEEHKERCRTFLQSTDPGDTASAEARHIK  180
                                 RDALTGHLRTHSVEKPYKCEFCGRSYKQRSSLEEHKERCR:FLQ:.D GD:AS.EARHIK
mous aiolos. protein             RDALTGHLRTHSVEKPYKCEFCGRSYKQRSSLEEHKERCRAFLQNPDLGDAASVEARHIK  244

human Aiolos protein AioC/hAio2  AEMGSERALVLDRLASNVAKRKSSMPQKF  209
                                 AEMGSERALVLDRLASNVAKRKSSMPQKF
mouseaiolos. protein             AEMGSERALVLDRLASNVAKRKSSMPQKF  273
```

FIGURE 5B

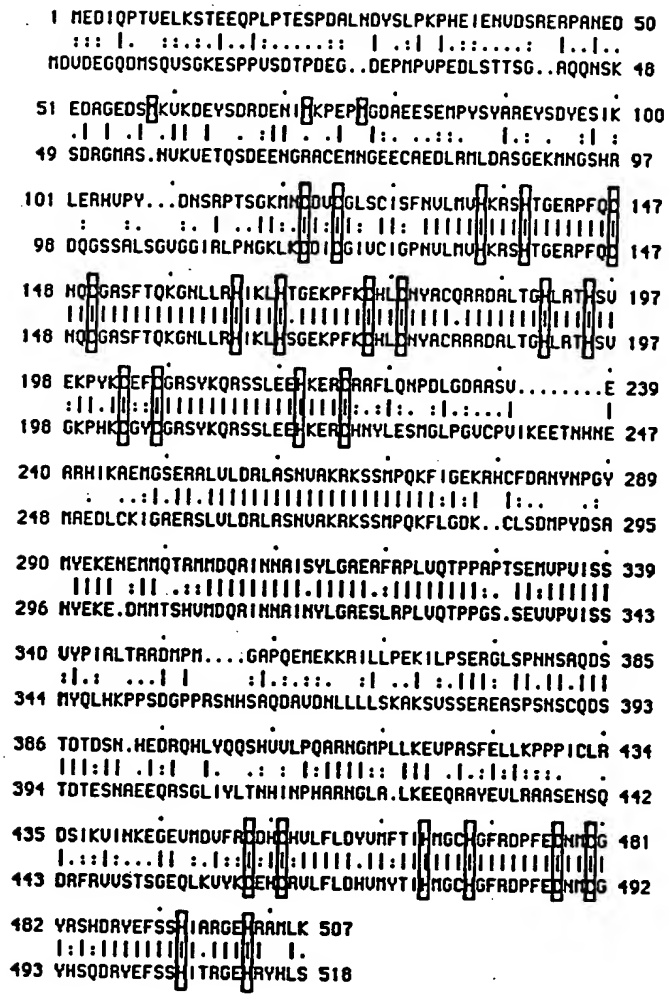


FIGURE 6

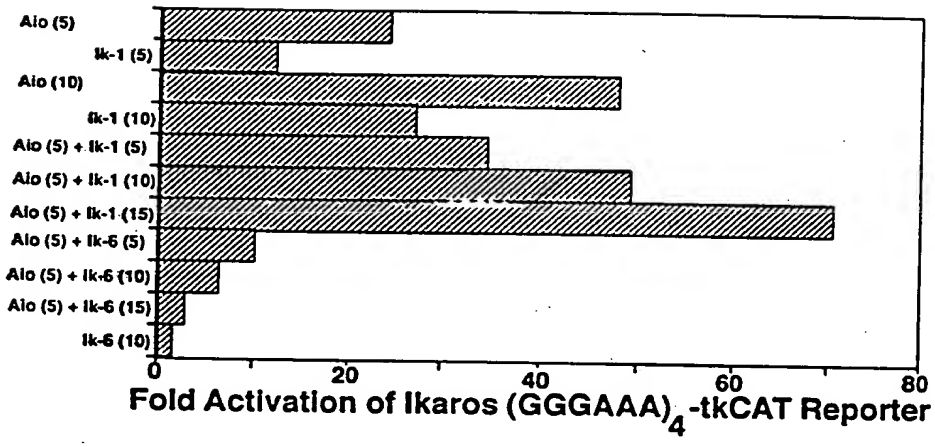
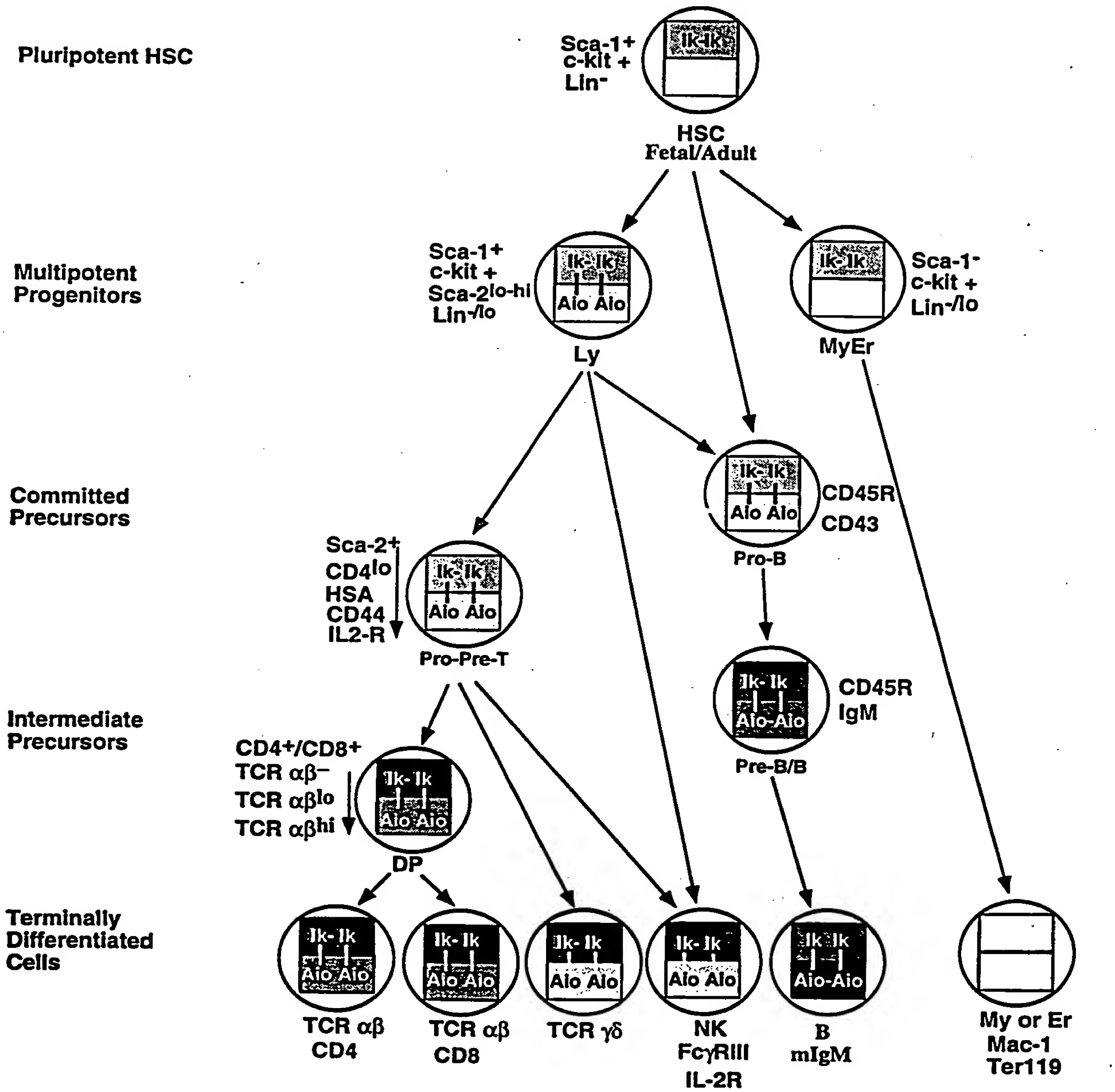


FIGURE 7



Pluripotent HSC
Sca-1+
c-kit +
Lin-
Ik-Ik
HSC
Fetal/Adult
Multipotent
Progenitors
Sca-1+
c-kit +
Sca-2lo-hi
Lin-/lo
Ik-Ik
Aio Aio
Ly
Ik-Ik
Sca-1-
c-kit +
Lin-/lo
MyEr
Committed
Precursors
Ik-Ik
Aio Aio
CD45R
CD43
Pro-B
Sca-2+
CD4lo
HSA
CD44
IL2-R
Ik-Ik
Aio Aio
Pro-Pre-T
Ik-Ik
Aio-Aio
CD45R
IgM
Pre-B/B
Intermediate
Precursors
CD4+/CD8+
TCR αβ−
TCR αβlo
TCR αβhi
Ik-Ik
Aio Aio
DP
Terminally
Differentiated
Cells
Ik-Ik
Aio Aio
TCR αβ
CD4
Ik-Ik
Aio Aio
TCR αβ
CD8
Ik-Ik
Aio Aio
TCR γδ
Ik-Ik
Aio Aio
NK
FcγRIII
IL-2R
Ik-Ik
Aio-Aio
B
mIgM
My or Er
Mac-1
Ter119

FIGURE 8

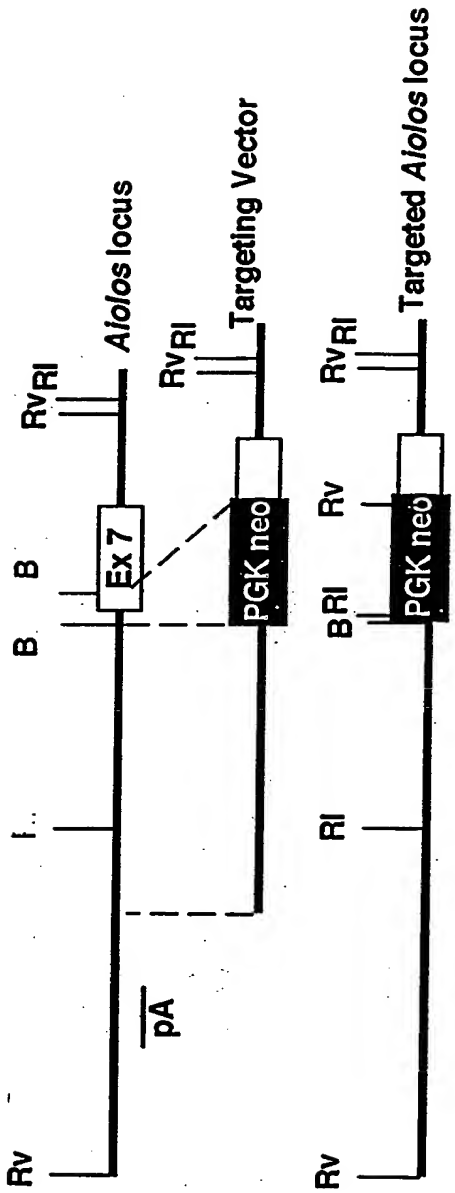


FIGURE 9